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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,292	02/13/2002	Toshiyuki Nagasaku	NIT-324	3497

7590 12/31/2003

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EXAMINER

COX, CASSANDRA F

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/073,292

Applicant(s)

NAGASAKU ET AL.

Examiner

Cassandra Cox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 7-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, and 13-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Heide (U.S. Patent No. 5,701,104).

In reference to claim 1, Heide discloses in Figure 5 an oscillator comprising: an active device (TV); a substrate (S; shown in Figure 3); a microstrip line (L) formed on the substrate (S); and a dielectric block (DR) disposed to couple with the microstrip line (L); wherein the microstrip line (L) and the dielectric block (DR) form a resonator, the active device (TV) and the resonator (L, DR) are electrically connected with each other, the active device (TV) produces a negative resistance in a desired oscillation frequency band, and a resonance frequency of the lowest order mode of the dielectric block is lower than the desired oscillation frequency and a resonance frequency band of one of the higher order modes covers the desired oscillation frequency (see ABSTRACT). The same applies to claims 13 (wherein it is considered to be well known in the art that an oscillator of the design mentioned above can be used in a transmitter-receiver module comprising an antenna unit electrically connected to the oscillator) and 17 (wherein it is considered to be well known in the art that an oscillator of the design mentioned above can be used in a radar system comprising a transmitter antenna electrically connected

to the oscillator, a mixer electrically connected to the oscillator and a receiver antenna electrically connected to the mixer), of which fact official notice is taken. It is considered obvious that the oscillator could be used in various environments as called for in claims 13 and 17.

In reference to claim 2, because Heide discloses in column 1, lines 5-15 that the resonator is dielectric the substrate is also seen to be a dielectric substrate. The same applies to claims 14 and 18.

In reference to claim 3, Heide also discloses that the active device (TV), the microstrip line (L), and the dielectric block (DR) are mounted on the common substrate (see Figure 3 and 5). The same applies to claims 4, 15, and 19.

In reference to claim 5, whether the active device is mounted on another substrate different from the substrate is seen to be a design expedient dependent on the particular environment and the desired outcome. The same applies to claims 6, 16, and 20.

Allowable Subject Matter

3. Claims 7-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: Claims 7-12 would be allowable because the closest prior art of record fails to disclose a circuit as shown in Figure 4 wherein the oscillator includes a variable reactance device (11) between the active device (6) and the resonator (1, 3), and a

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control of an oscillation frequency is possible by a characteristic control (12) of the variable reactance device in combination with the rest of the limitations of the base claims and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cassandra Cox whose telephone number is 703-306-5735. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM and on alternate Fridays from 8:00 AM to 4:30 PM.

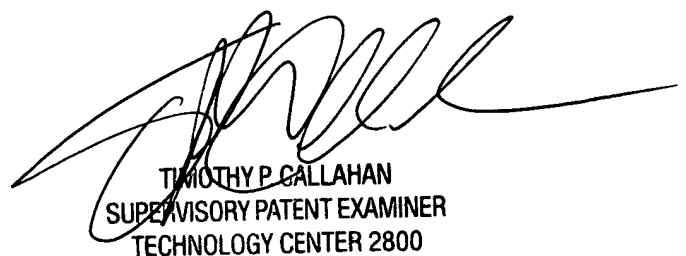
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (703)-308-4876. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CC



December 23, 2003



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800